CHAPTER 7

Reservoir Lands Planning

As a steward of critically important natural resources across the Tennessee Valley, TVA has a duty to manage its lands sustainably for present and future generations. Reservoir land planning guides TVA management decisions on natural resources and property administration. TVA's Land Policy, approved by the board in 2006, governs the planning, retention and disposal of land under TVA's stewardship. The TVA board recognized the public value of reservoir lands and, by approving the Land Policy, supported the position that TVA should continue to provide for their public use and enjoyment. The board said regarding the Land Policy:

> *"TVA has a duty to manage its lands wisely for present and future generations. Accordingly, it is TVA's policy to manage its lands to protect the integrated operation of the TVA reservoir and power systems, to provide for appropriate public use and enjoyment of the reservoir system, and to provide for continuing economic growth in the Valley. Recognizing that historical land transfers have contributed substantially to meeting multipurpose objectives, it further is TVA's policy to preserve reservoir lands remaining under its control in public ownership except in those rare instances where the benefits to the public will be so significant that transferring lands from TVA control to private ownership or another public entity is justified."*

TVA's integrated resource management approach focuses on balancing flood control, navigation, power generation, water quality, recreation, and other land use needs. Lands planning is one of the important tools TVA has to accomplish this.

As a tool for managing lands around its reservoirs for optimal public benefit, TVA has developed reservoir land management plans (RLMPs). Such plans support land and water program goals while balancing other competing and sometimes conflicting resource uses. By providing a clear statement of how TVA intends to manage land, and by identifying a specific use for each individual tract of land, TVA aligns the use of public lands with current policies as well as with its responsibilities under the TVA Act. Public input is sought during the planning process, and completed plans are adopted as agency policy.

7.1 History of Reservoir Lands Planning

Throughout its history, TVA has managed public lands to meet a wide range of regional and local resource development needs and to improve the quality of life, both within specific reservoir areas and throughout the Tennessee Valley. Public lands adjacent to TVA reservoirs, together with adjoining private lands, have been used for public parks, industrial development, commercial recreation, residential development, tourism development, and forest and wildlife management areas, and to meet a variety of other needs associated with local communities and government agencies.

Shortly after its creation in 1933, TVA began a massive dam and reservoir construction program that required the purchase of approximately 1.3 million acres of land for the creation of 46 reservoirs within the Tennessee Valley region. Of these 1.3 million acres, approximately 509,000 have been sold or transferred from TVA's control, the majority of which were transferred to other federal and state agencies for public use. Of the remaining land, approximately 470,000 acres are located underneath the water of the reservoir system. This leaves approximately 293,000 acres of land along these reservoirs that TVA currently manages for the benefit of the public.

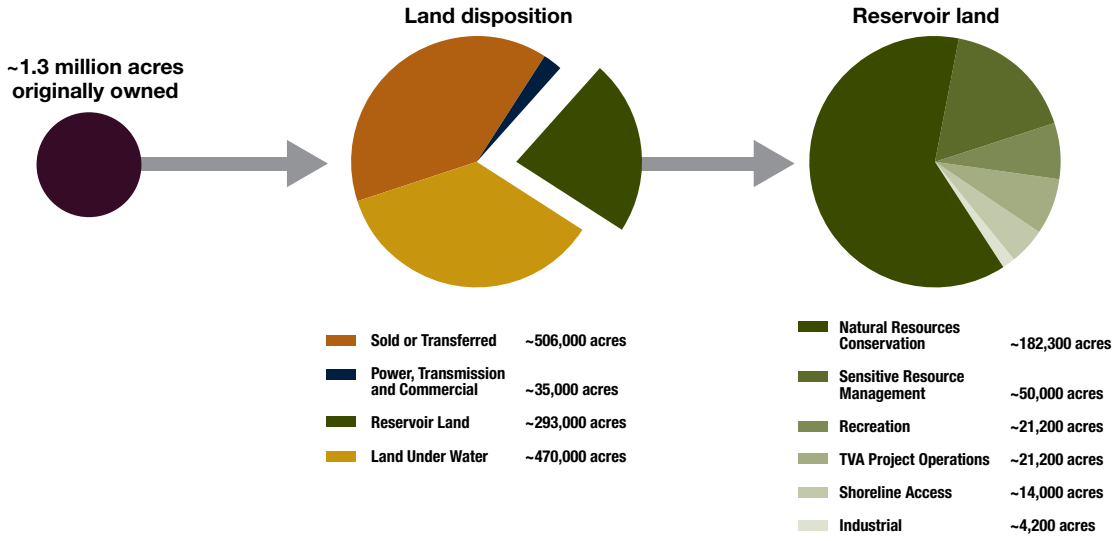


Figure 7.1: History of lands under TVA management

An increasing demand for use of these remaining lands sometimes results in conflicting public opinions regarding the most appropriate use of individual parcels. These competing interests and development pressures, coupled with today's environmental awareness, underscore the necessity for a systematic and comprehensive planning approach to the management, retention, and disposal of reservoir lands managed by TVA. TVA began planning its reservoir lands in the 1960s and has implemented three different land planning methodologies for classifying reservoir lands since that time:

- Forecast system
- Multiple-use tract locations
- Single-use parcel allocations

The forecast system initially was used to guide most land use decisions. The forecast system was an in-house process to document actual and prospective uses for certain TVA-managed land around a reservoir using a variable set of designations. A forecast record book was prepared to serve as a general guide for use or potential development of each TVA reservoir. Decisions on the best use of the property were made based on internal agency expertise and incorporated local and regional needs for various land uses as determined by TVA.

In 1979, TVA shifted its lands planning approach to a public forum and applied the multiple-use tract allocations methodology, which was a more systematic approach to planning reservoir lands. TVA lands were subdivided into manageable tracts and assigned as appropriate multiple-use designations from 10 categories: wildlife management, forest management, recreation, cultural resources management, agriculture, navigation, visual protection, open space, special management areas and industrial sites. The narrow strips of TVA-managed land (known as marginal strips) that front property that TVA had previously sold or transferred were not included under this planning methodology. For example, TVA shoreland fronting former TVA reservoir land that was sold for private development purposes with deeded rights to apply to construct private shoreline improvements was not included in the planning effort. Additionally, the multiple-use tract allocation method often did not plan land that was committed to a long-term or permanent use, such as parcels encumbered by easements or parcels used for TVA dam reservations or power plants. Only one reservoir was considered per land plan, and the plans were approved by the TVA board as agency policy.

In 1999, in an effort to more clearly define and commit to suitable uses of reservoir lands, TVA began using the single-use parcel allocation method, which is still in use today. Similar to the multiple-use tract allocation methodology, TVA-managed lands are subdivided into manageable parcels, and each parcel is designated for a single use or allocation. The seven zone designations under the single use parcel allocation include: non-TVA shoreland, project operations, sensitive resource management, natural resource conservation, industrial, developed recreation, and shoreline access. A description of each zone can be found in Appendix 7.6. Under this methodology, RLMPs focus on individual reservoirs or groups of reservoirs. Even though some RLMPs under this method may include multiple reservoirs (e.g., Mountain Reservoirs Land Management Plan), the planning is still performed on a reservoir-by-reservoir basis. As with the multiple-use tract allocation methodology, the single-use parcel allocation RLMPs are planned in a public forum and approved by the TVA board as agency policy.

Reservoirs Valleywide (46 Total)[1]

Unplanned[2]			
Great Falls	Wilson		
Unplanned - Beech River Reservoirs Managed Under Contract by Beech River Watershed Development Authority			
Beech River	Cedar	Dogwood	Lost Creek
Pin Oak	Pine	Redbud	Sycamore
Forecast System (1960s-1979)			
Fort Loudoun	Normandy		
Multiple Use Tract Allocation Methodology (1979-1999)			
Chickamauga - 1989	Kentucky - 1985	Nickajack - 1990	Wheeler - 1995
Single Use Tract Allocation Methodology (1999 - Present)			
Melton Hill - 1999	Cedar Creek - 2001	Nottely - 2010	South Holston - 2010
Tellico - 2000	Little Bear Creek - 2001	Ocoee 1 - 2010	Wilbur - 2010
Tims Ford - 2000	Upper Bear Creek – 2001	Ocoee 2 - 2010	Watauga - 2010
Cherokee - 2001	Appalachia - 2009	Ocoee 3 - 2010	Douglas - 2010
Guntersville - 2001	Blue Ridge - 2010	Beaver Creek - 2010	Nolichucky - 2010
Norris - 2001	Chatuge - 2010	Boone - 2010	Watts Bar - 2010
Pickwick - 2002	Fontana - 2010	Clear Creek - 2010	
Big Bear Creek - 2001	Hiwassee - 2010	Fort Patrick Henry - 2010	

Combined Reservoir Land Management Plan Color Key:

Bear Creeks Reservoirs LMP | **Mountain Reservoirs LMP** | **NE Tributary Reserviors LMP** | **Douglas-Nolichucky Tributary Reservoirs LMP**

Figure 7.2 Summary of reservoir land management plans by planning methodology

[1] Maps of the existing RLMPs and RLA data can be found at: www.tva.com/environment/land/land_mgmt_plans.htm and www.tva.com/environment/land/assessment/

[2] Minimal TVA land on reservoir

With reservoirs planned using different methodologies, it is difficult to calculate the acreage of TVA-managed lands as a whole that have been planned for sensitive resources, natural resource management, industrial development, and recreation. In order to create a consistent reservoir lands planning methodology across the Valley, reservoirs that have forecast system designations or multiple-use tract allocations are slated for conversion to the single use parcel allocation. One challenge however is that converting each reservoir land management plan to the current methodology can be a lengthy process.

To address this issue, the Rapid Lands Assessment (RLA) tool was developed in 2006 to quickly convert the forecast system designations and multiple use tract allocations to single use parcel allocations for comparison purposes. By converting parcels to the single use parcel allocation, TVA is able to compare reservoir lands across the Valley. The information obtained from rapid lands assessment provides acreage estimates of lands managed in the various zones and allocations, proving invaluable for planning and analysis purposes. These data are estimates only though, and the TVA board has not approved these estimates in lieu of the formal land plans.

7.2 Goal

TVA will strive to continue to balance shoreline development, recreational use, sensitive and natural resource management, industrial use, and other land uses in a way that maintains the quality of life and other important values across the Valley.

7.3 Comprehensive Valleywide Land Plan

Overview

As a regional development agency and the nation's largest public power provider, TVA is committed to protecting and sustaining the environmental resources of the Tennessee Valley for future generations through leadership in clean energy innovation and environmental management. In managing its public lands and resources, TVA seeks to provide efficient resource stewardship that is responsive to stakeholder interests.

TVA intends to manage its public land for an optimum level of multiple uses and benefits that protect and enhance natural, cultural, recreational, and visual resources in a cost-effective manner. Through this approach, TVA ensures that resource stewardship issues and stakeholder interests are considered while optimizing benefits and minimizing conflicts.

As part of the NRP, TVA has developed a Comprehensive Valleywide Land Plan. This Valleywide Plan will guide resource management and administration decisions on the approximately 293,000 acres of TVA-managed property around 46 reservoirs. It will identify the most suitable uses for the land under TVA's control, identifying areas for project operations, sensitive resource management, natural resource conservation, industrial/commercial development, developed recreation, and shoreline access.

The objectives of the Valleywide Plan, listed below, are designed to implement TVA's mission of serving the Valley through energy, environment, and economic development.

Objective 1
Apply a systematic method of evaluating and identifying the most suitable uses of TVA public lands using resource data, stakeholder input, suitability and capability analyses, and TVA staff input.

Objective 2
Identify land use zone allocations to optimize public benefit and balance competing demands for the use of public lands.

Objective 3
Identify land use zone allocations to support TVA's broad regional resource development mission. TVA reservoir properties are managed to provide multiple public benefits, including recreation, conservation, and economic development.

Objective 4
Provide a clear process by which TVA will respond to requests for use of TVA public land.

Objective 5
Comply with federal regulations and executive orders.

Objective 6
Enhance the protection of significant resources, including threatened and endangered species, cultural resources, wetlands, unique habitats, natural areas, water quality, and the visual character of the reservoir.

Objective 7
Provide a mechanism that allows local, state, and federal infrastructure projects when the use is compatible with the zone allocation.

Under the Valleywide Plan, TVA's implementation of reservoir lands planning will shift from a reservoir-specific focus to a more comprehensive Valleywide perspective. The single use parcel allocation methodology will still apply for individual reservoirs, but the Valleywide Plan identifies target ranges

for allocations to each land use zone for the region as a whole.

Section 7.5 contains the land use zone definitions for the Valleywide Plan and subsequent land planning efforts.

The target ranges for the Valleywide Plan were developed using the single use parcel allocations in existing board-approved reservoir land management plans. For the remaining reservoirs that utilize a different planning methodology, the rapid lands assessment was used to identify comparable land use zone allocations. Together, the existing reservoir land management plans and information obtained through rapid lands assessments were blended together with suitability studies conducted as a result of the Land Policy to create land use zone allocations for the Valleywide Plan.

TVA anticipates that some parcels of land may be better represented by different land use allocations than those initially identified. For example, field assessments may identify additional areas that warrant the sensitive resource management allocation. In addition, TVA may determine, either for its own management purposes or as a result of public input, that certain parcels of land should be used differently from how they have been used in the past. To anticipate these reasonably foreseeable changes, the Valleywide Plan establishes an allocation range for each land use zone.

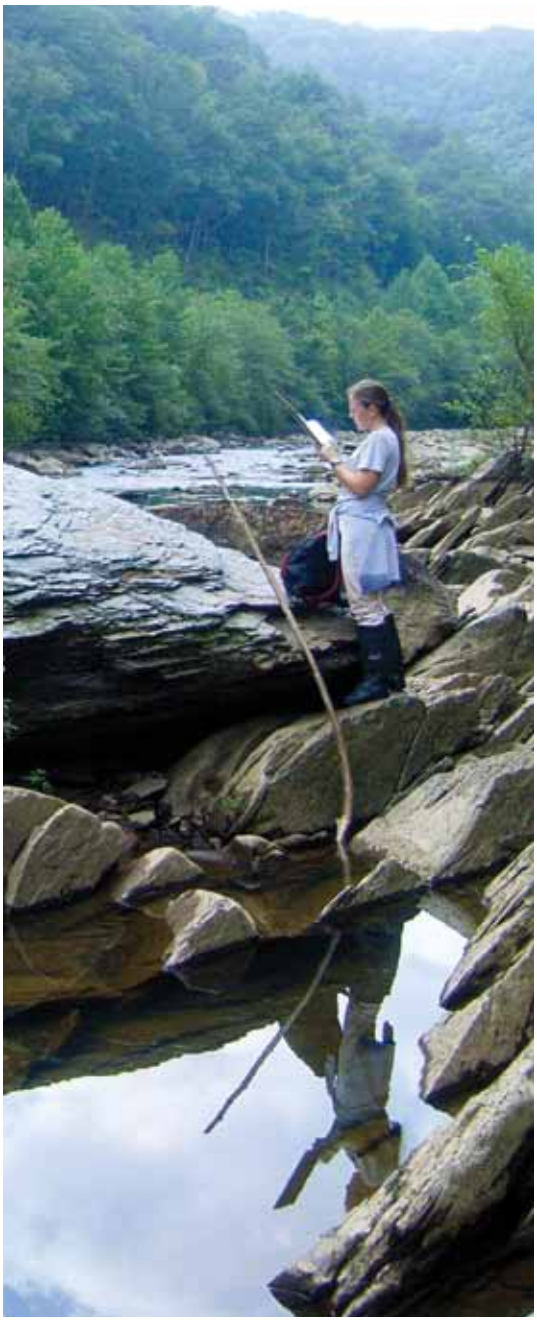
Allocation Designation		Current Allocation*	CVLP Range**
Zone 2	Project Operations	7%	5% - 7%
Zone 3	Sensitive Resource Management	17%	16% - 18%
Zone 4	Natural Resource Conservation	61%	58% - 65%
Zone 5	Industrial	2%	1% - 2%
Zone 6	Developed Recreation	8%	8% - 10%
Zone 7	Shoreline Access	5%	5%

* *Current allocations at each individual reservoir can be found in Section 7.6.*
** *Represents the percentage of land within each zone allocation. Does not represent shoreline miles.*

Figure 7.3 Current zone allocations and Comprehensive Valleywide Land Plan ranges

Ranges represent the total percentage of TVA lands that are or will be designated to each zone across TVA reservoirs as a whole. For example, Zone 3 lands (sensitive resource management) should account for 16-18 percent of the overall total when acreage from all of the 46 reservoirs planned by TVA is summed together. Each individual reservoir will not necessarily have 16-18 percent of its TVA-managed lands designated to Zone 3; instead, the total of all reservoirs together will fall into that range.

During subsequent planning efforts, lands that are no longer be suitable for their current allocation would typically revert to a natural resource conservation (Zone 4) designation. If the land is capable and suitable for another use and the change is within the allocation ranges of the CVLP, reallocation to a different zone is possible. As an example, a tract allocated for project operations (Zone 2) would be reallocated to natural resource conservation (Zone 4) when its primary use is no longer needed to support project operations. If existing recreational infrastructure is present, the tract could be reallocated to developed recreation (Zone 6). Lands previously allocated to sensitive resource management (Zone 3) would only be reallocated if it is determined that the sensitive resource and/or its habitat is no longer present. In that case, the tract would be reallocated to the suitable land use identified in the planning process.



Planning Process

Under the Comprehensive Valleywide Land Plan, TVA will develop and update reservoir land management plans for a portion of a reservoir, an entire reservoir, or a group of reservoirs using the single use parcel allocation methodology. At a minimum, the development process will consist of the key components listed below.

- TVA will collaborate with other federal and state agencies to share information and data pertaining to developed recreation, natural resource management, and water resources. During development of the NRP, TVA met with a number of agencies to seek input into the NRP process and to foster future partnerships. When conducting future lands planning efforts, TVA will build from these initial agency interactions by sharing existing resource data for the area, conducting capability and suitability analysis (as appropriate), and gathering information to predict future public needs for specific allocations.
- Draft reservoir land management plans will be issued for public comment and will include an overview of the new lands planning process, parcel descriptions, and a set of maps.
- TVA will consider proposals for alternative uses of TVA-managed lands while seeking and incorporating input from the public on the draft plans.
- TVA will continue to solicit public input into current and future needs, define project issues and concerns, and solicit feedback on a draft document during the lands planning process. In addition to issuing public notifications, TVA will consider other avenues such as public meetings, facilitated small group workshops, stakeholder consultations, and questionnaires for collecting public input. Public input is essential for making decisions concerning allocation of TVA-managed public land.
- After considering input on the draft plans, TVA will issue a final plan, which will include an overview of the lands planning process, a summary of public input, parcel descriptions, and a set of maps.

The development of each reservoir land management plan is a comprehensive planning effort. To start, the characteristics of each parcel are reviewed by land use specialists. Deeds of selected tracts previously sold to public entities, private entities and individuals are also reviewed in order to identify existing shoreline access rights. In addition, all existing commitments are recognized, including leases, licenses and easements.

Land currently committed to a specific use is then allocated to a zone compatible with that use unless there is a need for reassessment. Committed lands include the following: properties where TVA has granted land rights (easements, leases, etc.) for specific uses, properties where TVA has previously identified resources in need of protection, TVA project operations lands (transmission lines, dam reservations, etc.), and lands fronting national forest properties. Possible reasons to change a committed land use include the prevention or remediation of adverse impacts resulting from the actions of a lease or easement holder.

Sensitive resource surveys are then conducted as appropriate on the remaining uncommitted land. The need for field reviews on uncommitted parcels is determined based on data from the TVA Natural Heritage database and the professional judgment of TVA staff, including archaeologists and biologists. Land with identified sensitive resources is placed into Zone 3 (sensitive resource management). The remaining parcels are then allocated based on reservoir planning objectives and public input. Initial

recommendations are made by consensus among the TVA planning team.

After completing the analysis, a draft plan is issued to the public. Public comments are then incorporated, and a final reservoir land management plan is issued.

Benefits

The NRP will enable TVA to better balance its stewardship objectives and obligations while ensuring sound business practices. The goal of the Plan is to integrate objectives from all of TVA's natural resource programs for the benefit of the public while balancing competing and sometimes conflicting demands on resources.

In support of this goal, the Comprehensive Valleywide Land Plan provides a holistic approach to balancing shoreline development, recreational use, sensitive and natural resource management, and other uses by taking a regional look at resource demands and trends. It creates uniformity in the lands planning process by instituting one planning methodology for all reservoirs across the Valley and ensuring standardized parcel descriptions and zone definitions.

The Valleywide Plan also provides flexibility, creating benefit for the public. Portions of a reservoir can be planned as part of the Plan, allowing agility in financial and timing considerations, especially on larger reservoirs. The process is streamlined, as each plan meets a basic set of guidelines, shortening cycle times for planning. This will likely result in reservoirs being planned on a more regular basis than has occurred in the past, allowing TVA to be more responsive to changing conditions on each reservoir.

In addition to the benefits above, the Valleywide Plan will create significant cost savings. Currently, the costs associated with producing a reservoir land management plan range from $200,000 to $700,000 per plan. This is dependent on a number of factors, including the number and location of reservoirs in the plan and the level of public involvement. In addition, no programmatic NEPA coverage exists for the current land planning process, so an environmental impact statement must also be produced. Implementing the Valleywide Plan will provide programmatic NEPA coverage and reduce the duration and cost of each planning effort. Estimated production costs under the Plan will range from $20,000 to $250,000 for a single planning effort with variability dependent on the specifics of the reservoir.

Finally, and perhaps most important, the Valleywide Plan provides the public with a transparent guide to TVA's overarching goals for the Valley.

7.4 Implementation Strategy

As a first step in implementing the Comprehensive Valleywide Land Plan, reservoirs planned using the multiple use tract allocation methodology will be converted to single use parcel allocation. This group includes Chickamauga, Kentucky, Nickajack and Wheeler reservoirs. Because Kentucky Reservoir is so large, it is likely that it will be split into more manageable sizes (e.g., upper end and lower end) to simplify planning.

The reservoirs planned using the forecast system, Fort Loudoun and Normandy, will be converted to single use parcel allocation next, followed by the unplanned reservoirs: Great Falls, Wilson, and the eight Beech River reservoirs.

Once all reservoirs are updated to the single use parcel allocation methodology, the reservoirs previously planned using this method will then be updated in an order that gives consideration to the age of the current plan or any developing trends that warrant review.

Each reservoir plan update should take approximately six to 12 months to complete, with potentially more time needed to review the reservoirs currently under the older multiple use tract allocation system. Should unforeseen circumstances occur, the Valleywide Plan allows simple adjustments in planning priorities to address emerging issues on a specific reservoir or portion of a reservoir at any time in the planning cycle.

The outcomes of each planning effort will be included in periodic updates of the NRP, and TVA will track allocation changes to ensure that they continue to fall within the Valleywide Plan total allocation percentages. As the NRP is updated, the Valleywide Plan will be updated accordingly.

7.5 Measures of Success

Implementation efforts in this resource area will be regularly evaluated to track progress using the following measures of success:

Resource Area	Measures of Success	Time Frame
Lands Planning	Convert all reservoir land management plans to single-use parcel allocation	3-5 years
	Update all 46 reservoir land management plans	Every 5-10 years
	Refresh the Comprehensive Valleywide Land Plan	Every 3-5 years

7.6 Zone Definitions

Zone	Definition
1 Non-TVA Shoreland	Shoreland that TVA does not own in fee. This land may be privately owned or owned by a governmental entity other than TVA. Uses of this non-TVA land may include residential, industrial, commercial, and/or agricultural. In many instances, TVA may have purchased the right to flood and/or limit structures on this non-TVA land (i.e., flowage easement). TVA's permitting authority under Section 26a of the TVA Act applies to construction of structures on non-TVA shoreland. Non-TVA shoreland allocations are based on deeded rights and, therefore, will not change as a result of the lands planning process. This category is provided to assist in comprehensive evaluation of potential environmental impacts of TVA's allocation decision.
2 Project Operations	Land currently used, or planned for future use, for TVA operations and public works projects, including: • **Land adjacent to established navigation operations —** Locks, lock operations and maintenance facilities, and the navigation work boat dock and bases. • **Land used for TVA power projects operations —** Generation facilities, switchyards, and transmission facilities and rights-of-way. • **Dam reservation land —** Areas acquired and managed for the primary purpose of supporting the operation and maintenance of TVA dams and associated infrastructure; secondary uses may also include developed and dispersed recreation, maintenance facilities, miscellaneous TVA field offices, research areas, and visitor centers. • **Navigation safety harbors/landings —** Areas used for tying off commercial barge tows and recreational boats during adverse weather conditions or equipment malfunctions. • **Navigation dayboards and beacons —** Areas with structures placed on the shoreline to facilitate navigation. • **Public works projects —** Includes rights-of-way for public utility infrastructure, such as sewer lines, water lines, transmission lines, and major highway projects.
3 Sensitive Resource Management	Land managed for protection and enhancement of sensitive resources. Sensitive resources, as defined by TVA, include resources protected by state or federal law or executive order and other land features/natural resources TVA considers important to the area viewscape or natural environment. Recreational natural resource activities, such as hunting, wildlife observation, and camping on undeveloped sites, may occur in this zone, but the overriding focus is protecting and enhancing the sensitive resource the site supports. Areas included are: • TVA-designated sites with potentially **significant archaeological resources.** • TVA public land with **sites/structures listed in or eligible for listing in the National Register of Historic Places.** • **Wetlands —** Aquatic bed, emergent, forested, and scrub-shrub wetlands as defined by TVA.

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Zone	Definition
3 Sensitive Resource Management (continued)	• **TVA public land under easement, lease, or license to other agencies/individuals** for resource protection purposes. • **TVA public land fronting land owned by other agencies/individuals** for resource protection purposes. • **Habitat protection areas —** These TVA natural areas are managed to protect populations of species identified as threatened or endangered by the U.S. Fish and Wildlife Service, state-listed species, and any unusual or exemplary biological communities/geological features. • **Ecological study areas —** These TVA natural areas are designated as suitable for ecological research and environmental education by a recognized authority or agency. They typically contain plant or animal populations of scientific interest or are of interest to an educational institution that would utilize the area. • **Small wild areas —** These TVA natural areas are managed by TVA or in cooperation with other public agencies or private conservation organizations to protect exceptional natural, scenic, or aesthetic qualities that can also support dispersed, low-impact types of outdoor recreation. • **River corridor with sensitive resources present —** A river corridor is a segment of a river and the adjacent land along the banks. River corridors often consist of a linear green space of TVA land serving as a buffer to tributary rivers entering a reservoir. These areas will be included in Zone 3 when identified sensitive resources are present. • **Significant scenic areas —** Areas designated for visual protection because of their unique vistas or particularly scenic qualities. • **Champion tree site —** Areas designated by TVA as sites that contain the largest known individual tree of its species in that state. The state forestry agency "Champion Tree Program" designates the tree, while TVA designates the area of the sites for those located on TVA public land. • **Other sensitive ecological areas —** Examples of these areas include heron rookeries, uncommon plant and animal communities, and unique cave or karst formations.
4 Natural Resource Conservation	Land managed for the enhancement of natural resources for human use and appreciation. Management of resources is the primary focus of this zone. Appropriate activities in this zone include hunting, timber management to promote forest health, wildlife observation, and camping on undeveloped sites. Areas included are: • **TVA public land** managed for wildlife or forest management projects. • **TVA public land under easement, lease, or license to other agencies** for wildlife or forest management purposes. • **TVA public land fronting land owned by other agencies** for wildlife or forest management purposes. • **Dispersed recreation areas** maintained for passive, dispersed recreation activities, such as hunting, hiking, bird watching, photography, primitive camping, bank fishing, and picnicking. • **Shoreline conservation areas —** Narrow riparian strips of vegetation between the water's edge and TVA's back-lying property that are managed for wildlife, water quality, or visual qualities. • **Wildlife observation areas —** TVA natural areas with unique concentrations of easily observed wildlife that are managed as public wildlife observation areas. • **River corridor without sensitive resources present —** A river corridor is a linear green space along both stream banks of selected tributaries entering a reservoir managed for light boat access at specific sites, riverside trails, and interpretive activities. River corridors will be included in Zone 4 unless sensitive resources are present (see Zone 3). • **Islands** without sensitive resources or existing development.

Zone	Definition
5 Industrial	Land currently used, or planned for future use, for economic development, including businesses in distribution/processing/assembly and manufacturing. Preference will be given for businesses requiring water access. There are two primary types of uses for TVA land allocated for Industrial: **(1) access for water supply or structures associated with navigation such as barge terminals, mooring cells, etc., or (2) land-based development potential.** Areas included are: • **TVA public land under easement, lease, or license to other agencies/individuals/entities** for industrial purposes. • **TVA public land fronting land owned by other agencies/individuals/entities** for industrial purposes. In some cases, TVA land allocated to industrial use would be declared surplus and sold at public auction. Types of development that can occur on this land are: • **Industry —** Manufacturing, fabrication, and distribution/processing/assembly involving chemical, electronics, metalworking, plastics, telecommunications, transportation, and other industries. Industry does not include retail or service-based businesses. • **Industrial access —** Access to the waterfront by back-lying property owners across TVA property for water intakes, wastewater discharge, or conveyance of commodities (i.e., pipelines, rail, or road). Barge terminals are associated with industrial access corridors. • **Barge terminal sites —** Public or private facilities used for the transfer, loading, and unloading of commodities between barges and trucks, trains, storage areas, or industrial plants. • **Fleeting areas —** Sites used by the towing industry to switch barges between tows or barge terminals that have both offshore and onshore facilities. • **Minor commercial landing —** A temporary or intermittent activity that takes place without permanent improvements to the property. These sites can be used for transferring pulpwood, sand, gravel, and other natural resource commodities between barges and trucks.
6 Developed Recreation	Land currently used, or planned for future use, for concentrated, active recreational activities that require capital improvement and maintenance of developed infrastructure, including: • **TVA public land** developed for recreational purposes, such as campgrounds, day-use areas, etc. • **TVA public land under easement, lease, or license to other agencies/individuals/entities** for developed recreational purposes. • **TVA public land fronting land owned by other agencies/individuals/entities** for developed recreational purposes. CONTINUED ▶

Zone	Definition
6 Developed Recreation (continued)	Residential use, long-term accommodations, and/or individually owned units are not permitted on land allocated for developed recreation. Types of development that can occur on this land are: • **Public recreation —** Recreation amenities developed and owned by a public agency that are open to the public. Public recreation areas may have varying levels of development, ranging from a water access site (e.g., launching ramp) to a marina facility. Facilities at public recreation areas could include playgrounds/play structures, picnic facilities, tennis courts, horseshoe areas, play courts, recreation centers, trails, greenways, natural areas, amphitheaters, food concessions (vending, snack bar), access to water for fishing and boating, swimming areas and swimming pools, launching ramps, courtesy piers, canoe access, marina facilities owned by the public entity, parking, and campgrounds. Cabins or other overnight accommodations (other than campgrounds) are only permitted if the public recreation area is operated by a state or state agency as a component of a state park system. Public recreation areas and facilities are typically owned and operated by the federal, state, county, or local government. However, private entities may operate recreation facilities on public recreation land as concessionaires under agreement with the public entity controlling the property. The use of the facilities may be offered free or for a fee. Time-forward, public-private partnerships where facilities are owned by private investors will not be approved on public recreation land. All structures and facilities should be owned by the public entity. • **Commercial recreation —** Recreation amenities that are provided for a fee to the public intending to produce a profit for the private owner/operator. These primarily water-based facilities typically include marinas and affiliated support facilities such as stores, restaurants, campgrounds, and cabins and lodges. Where applicable, TVA will require appropriate compensation for the commercial use of the property.
7 Shoreline Access	TVA-owned land where Section 26a applications and other land use approvals for residential shoreline alterations are considered in accordance with TVA's Shoreline Management Policy. Types of development/management that may be permitted on this land are: • **Residential water use facilities**, e.g., docks, piers, launching ramps/driveways, marine railways, boathouses, enclosed storage space, and non-potable water intakes. • **Shoreline access corridors**, e.g., pathways, wooden steps, walkways, or mulched paths that can include portable picnic tables and utility lines. • **Shoreline stabilization**, e.g., bioengineering, riprap, gabions, and retaining walls. • **Shoreline vegetation management.**

7.7 Current Land Zone Allocations By Reservoir

Note: Zone 1 – Non-TVA Shoreland is not represented because the parcels are private land (on which TVA owns flowage rights). The figures in the following table (1) have been rounded to the nearest whole number; (2) are an estimate based on the RLA; (3) are subject to change pending additional verification; and (4) contain a slight margin of error.

	Current Land Zone Allocation					
Reservoir	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7
Apalachia Reservoir	91	0	*	0	9	0
Beaver Creek Reservoir	11	0	0	0	86	0
Beech River Projects Reservoirs	6	0	51	0	43	0
Big Bear Creek Reservoir	7	82	0	0	10	0
Blue Ridge Reservoir	62	3	6	0	3	26
Boone Reservoir	24	17	51	0	9	<1
Cedar Creek Reservoir	10	66	10	0	8	5
Chatuge Reservoir	22	1	49	0	24	4
Cherokee Reservoir	7	12	68	0	9	3
Chickamauga Reservoir	9	34	40	1	7	10
Clear Creek Reservoir	100	0	0	0	0	0
Douglas Reservoir	50	3	40	0	6	1
Fontana Reservoir	43	0	5	0	47	4
Fort Loudoun Reservoir	33	3	18	<1	2	44
Fort Patrick Henry Reservoir	27	7	41	0	14	10
Great Falls Reservoir	100	0	0	0	0	0
Guntersville Reservoir	6	27	60	1	5	2
Hiwassee Reservoir	36	11	44	0	4	4
Kentucky Reservoir	1	2	84	2	5	6
Little Bear Creek Reservoir	18	69	2	1	6	4
Melton Hill Reservoir	11	49	24	1	8	6
Nickajack Reservoir	20	25	51	3	3	0
Nolichucky Reservoir	5	57	13	<1	25	0
Normandy Reservoir	13	15	67	0	4	<1
Norris Reservoir	3	18	67	0	7	5
Nottely Reservoir	53	0	33	0	11	2
Ocoee Reservoirs	100	0	0	0	0	0
Pickwick Reservoir	7	8	69	3	8	6
South Holston Reservoir	28	<1	46	6	19	1
Tellico Reservoir	5	17	56	2	15	4
Tims Ford Reservoir**	9	15	58	1	6	10
Upper Bear Creek Reservoir	6	81	8	0	3	2
Watauga Reservoir	46	9	38	0	8	<1
Watts Bar Reservoir***	13	28	28	3	12	17
Wheeler Reservoir	4	24	65	2	8	<1
Wilbur Reservoir	83	0	17	0	0	0
Wilson Reservoir	0	0	7	0	63	30

* *Includes narrow strip of TVA-retained land along shoreline; acreage not calculated*

** *Tims Ford Reservoir contains an additional 64 acres allocated to Zone 8 or a conservation partnership. The allocation of public lands to Zone 8 has been discontinued. However, TVA will continue to manage lands allocated to Zone 8 per Agency policy*

*** *TVA is currently reviewing eight parcels of land impacted by the Kingston ash spill. The percentage of land allocated to Zones 2 and 7 may change slightly if these parcels are placed under these zones.*